

Closure of a persistent gastric leak using a cardiac septal occluder



Fig. 1 Anastomotic leak site immediately distal to the gastroesophageal junction along the staple line.



Fig. 2 The Amplatzer cardiac septal occluder device.

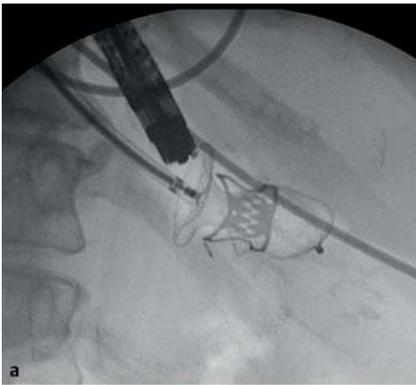


Fig. 3 Deployment of the cardiac septal occluder. **a** Fluoroscopic image during deployment of the cardiac septal occluder. The previously placed over-the-scope clip remains. **b** Endoscopic view of the occluder device after deployment.

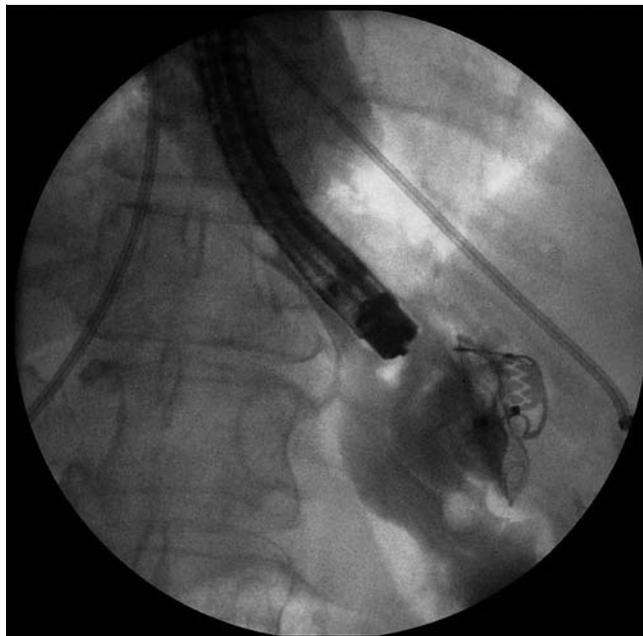


Fig. 4 Fluoroscopic image 8 weeks post-insertion showing complete closure of the leak.

Anastomotic leaks occur in up to 5% of patients who undergo bariatric surgical procedures [1]. Reoperation is associated with a high morbidity, and a mortality of up to 10% [2]. Therefore, endoscopic management should be considered in the first instance. We present a case of a gastric anastomotic leak that was successfully closed with a cardiac septal occluder device (Amplatzer; St. Jude Medical, Plymouth, Minnesota, USA).

A 50-year-old woman was admitted with tachycardia, fever, and vomiting 4 weeks after laparoscopic vertical sleeve gastrectomy. Abdominal computed tomography revealed a 6-cm collection lateral to the gastroesophageal junction. Percutaneous drain insertion did not result in clinical improvement.

Esophagogastroduodenoscopy (EGD) revealed a 6×4-mm leak immediately distal to the gastroesophageal junction along the staple line (▶ **Fig. 1**). Over-the-scope clip placement (Ovesco Endoscopy AG, Tübingen, Germany), fully-covered self-expandable esophageal stent insertion, and endoluminal suturing (Overstitch, Apollo Endosurgery, Austin, Texas, USA) all failed to achieve closure.

Therefore, closure was pursued using the cardiac septal occluder. The device is a self-expandable double umbrella-shaped

Video 1

Video demonstrating the occluder device, its deployment, and follow-up at 8 weeks.

polyester-covered nitinol wire mesh (● Fig. 2). A 12-Fr delivery catheter (80 cm in length) was inserted over a guidewire placed through the leak. The guidewire was removed and the deployment catheter (preloaded with the cardiac septal occluder) was inserted through the delivery catheter. The endoscope was placed alongside the catheter and an endoscopist deployed the cardiac septal occluder under endoscopic and fluoroscopic visualization (● Fig. 3). The total procedure time was 9 minutes.

The patient showed rapid clinical improvement, and the percutaneous drain was removed after 1 week. Repeat EGD at 8 weeks revealed no epithelialization of the device, and contrast injection demonstrated no leak (● Fig. 4).

This case demonstrates a novel, yet simple method of managing a postbariatric surgical anastomotic leak using a cardiac septal occluder. There are reports of successful use of this device in closing tracheoesophageal and gastrocolonic fistulae [3,4]. Of note, in contrast to the intravascular space, epithelialization does not appear to occur in the gastrointestinal tract. However, our intention is for the device to remain permanently in situ. Migration

of the device has been reported with potentially serious consequences and therefore it should be used only as a salvage therapy [5].

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Competing interests: P. Saxena has received consulting fees from Boston Scientific and has received research support from Cook Medical.

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